TOWARDS THE YEAR 2000

NOVA SCOTIA POWER'S

CORPORATE INITIATIVES

JUNE 1988

88-05865/

TOWARDS THE YEAR 2000

THE CLIMATE OF THE 90s

The Province of Nova Scotia is expected to experience a steady increase in end-use energy demand through the next decade and beyond.

Energy stability and economic development have been established by the Government of Nova Scotia as objectives in meeting this demand.

With electricity having been identified as the energy form which will account for the largest increase in energy use, Nova Scotia Power looks to the future with a well-defined planning process and a program to meet the electrical needs of Nova Scotia in a reliable, cost-effective, environmentally acceptable, economically positive manner.

Over the next decade, Nova Scotia Power will operate in a climate with significant potential for change, change that can be initiated by our customers, by the economy, by government and by the Corporation itself.

This changing climate will require flexibility by the Corporation and its employees and will necessitate a reinforcement of our traditional strengths and the development of new expertise.

The emerging decade will provide the Corporation not only with challenges but also with further opportunities of fulfilling its mandate from a business point of view, as well as from a social and economic standpoint.

The success that has occurred over the last decade provides a basis for confidence that challenges, of whatever nature, will be met in the reliable supply of a valuable product in a cost-effective and environmentally acceptable fashion.

TOWARDS THE YEAR 2000

OUR MANDATE

Nova Scotia Power has a dual mandate. Our core mandate is:

a. **To meet the needs of Nova Scotia for electric service at an acceptable standard of reliability and at the lowest long-term cost** and as an instrument of public purpose; our secondary role is:

b. **To serve the broad social and economic interests of Nova Scotia.**

Our core mandate describes our traditional role: the generation, transmission and distribution of electric power and the provision of service to our customers. **It defines the business purpose of the Corporation.** It is the basic reason for the Corporation's existence and, if this task is not performed well, we cannot hope to fulfill our secondary role.

The secondary role describes the **social and economic purpose** of the Corporation. It embraces such matters as developing Nova Scotia's coal resources, establishing power rates that will attract industry to the Province, employing Nova Scotians, protecting the credit rating of the Province and contributing to regional development.

OUR PHILOSOPHY

Nova Scotia Power will be a dynamic, innovative and financially sound enterprise which strives for quality and exhibits integrity and competence in all areas of its activites.

OBJECTIVES

Nova Scotia Power has a wide range of corporate objectives in fulfilling its mandate to serve the people of Nova Scotia. These objectives address every facet of our operation and will stand the test of time regardless of changes in our economic or operational climate as we move towards the year 2000.

The Corporation is optimistic that these objectives — embracing our customers, our employees, our environment, and the Nova Scotia community as a whole — will be met successfully.

Five years ago, Nova Scotia Power's stated objectives were: self-sufficiency, stabilized power rates, greater environmental awareness and increased dedication to the service of our customers.

We have attained total **financial self-sufficiency** in that no longer is fiscal assistance, direct or indirect, from the Province of Nova Scotia a factor in meeting our obligations. We have also attained unprecedented levels in the self-sufficiency of our generation through indigenous resources — coal and hydro — in supplying the electrical needs of Nova Scotia consumers.

Over the past five years, the Corporation's performance has reflected our priorities of rate stabilization and real productivity increases. As a result, rates have remained unchanged since April 1, 1983.

Concern for our environment is a commitment by the Corporation, our employees, our customers and governments at all levels. This awareness has resulted in significant progress in meeting our responsibility in this regard. Specifics on our environmental commitment are contained in the environment section of this Report.

Improved customer service — a long-term commitment — has shown measurable improvement in terms of customer satisfaction and reliability of service and in our customers' desire to participate in the development of their utility through the purchase of Nova Scotia Power Savings Bonds.

Over the next 10 years we will:

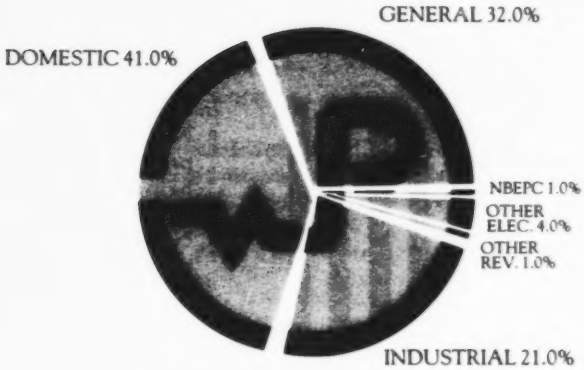
- **continue to improve customer satisfaction.**
- **continue to emphasize the importance of employees, employee relations, productivity, job satisfaction, safety and health.**
- **operate in an environmentally sound manner in all aspects of our operation.**
- **operate in a businesslike manner with self-sufficiency being the key, while, at the same time, retaining our secondary mandate and enhancing respect for our company.**
- **use innovative, state-of-the-art technology to ensure efficiency and economic achievements.**

TOWARDS THE YEAR 2000

SUPPLYING OUR CUSTOMERS

Three distinct customer classes comprise the electrical load that Nova Scotia Power must meet in serving the Province's needs.

NOVA SCOTIA POWER REVENUE PROFILE

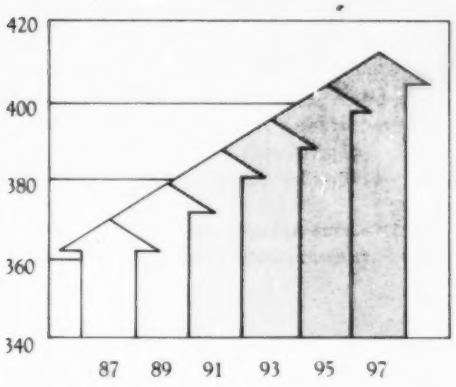


The domestic sector includes all energy used for domestic and household use, including water heating, space heating and appliance use. Growth in this sector is forecast to average **3.7%** per year over the next 10 years.

Over the next 10 years, our customer count is expected to increase from 364,673 to 407,600.

The general service, or commercial sector, includes all customers who provide or operate services such as restaurants, stores, banks, entertainment facilities and offices. It also includes unmetered services such as street lighting, area lighting, traffic lights. Over the next 10 years, the growth rate in this sector is forecast to average **2.7%.**

NUMBER OF ELECTRICAL CUSTOMERS

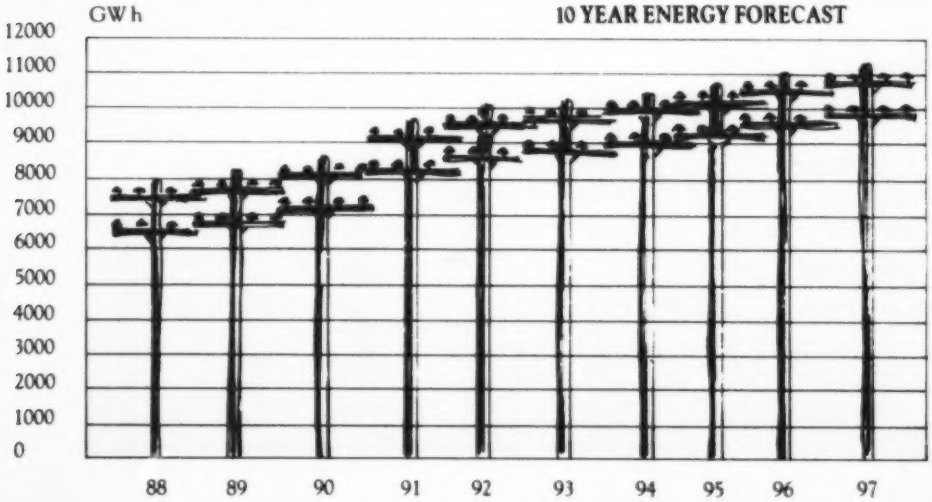


The industrial sector includes customers who manufacture goods or who process materials to produce a product of higher value. This includes such businesses as fish plants, pulp and paper mills, saw mills, the steel industry, mining, food processors, furniture and clothing manufacturers. A revitalized steel industry and planned expansion in the pulp and paper industry, combined with normal growth, result in an average 10-year growth forecast of **5%** in this sector.

The combination of all classes results in an annual growth average of 3.8% over the next 10 years.

This means that, over that period, Nova Scotia Power will require 500 megawatts of new generation to meet the requirements of Nova Scotia consumers, businesses and industries.

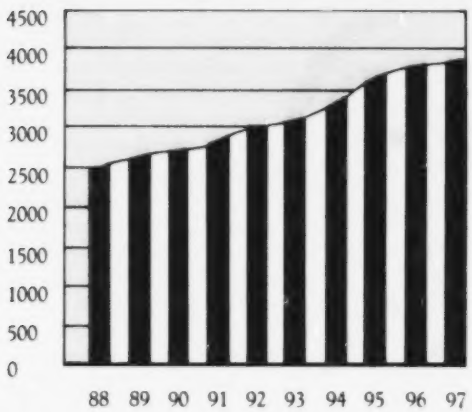
10 YEAR ENERGY FORECAST



Supply Options

Coal will continue to be the prime source of generation in Nova Scotia, and major system additions over the next decade will utilize this indigenous resource for reasons of cost advantage to both the utility and its customers and also because of the positive impact on the Nova Scotia economy.

NSPC FORECAST
COAL CONSUMPTION



Dependency on oil for generation will be minimized in keeping with the plans of the Corporation and the Province of Nova Scotia to lessen the use of imported fuel. Hydro production is anticipated to remain relatively stable in that essentially all of the Province's available, economically feasible hydro sites have been developed.

The availability of power produced by private developers and the possibility of incorporating demand side management form additional options for Nova Scotia Power in meeting the forecast demand over the long term. Developments such as wood chip generation or the control of customer loads could be advantageous in reducing imported oil consumption and purchases of energy from external sources whose availabilities are uncertain over the long term. Further, these options have the potential of reducing the Corporation's capital investment in generation facilities if the economics of such developments do not impose a burden on our electric consumers. The key factors are reliability and cost.

As we approach a new decade:

- **Nova Scotia Power will submit to the Board of Commissioners of Public Utilities its plans to meet generation requirements for 500 megawatts of additional capacity.**

In the immediate term:

- **Nova Scotia Power intends to call for proposals from the private sector to help meet 30 megawatts of capacity requirement.**
- **Nova Scotia Power will upgrade existing plants such as Glace Bay and the Point Tupper No. 1 Unit to meet the fast increasing load.**
- **Nova Scotia Power will work to have constructed Canada's first commercially-operated Circulating Fluidized Bed Combustion generating station.**

TOWARDS THE YEAR 2000

BUILDING OUR PROVINCE

Nova Scotia Power has a significant beneficial impact on the provincial economy through its construction and operation activities, and is committed to maximizing Nova Scotia content in all of its projects. Our current major project, the Trenton No. 6 generating unit, will include approximately $115 million of Nova Scotia supplies, materials and services and provide 300,000 person days of employment during construction.

A concerted effort in this regard has seen a marked increase in Nova Scotia content — from 58% of our supplies, materials and services in 1983 to 85% last year. The 1987-88 total represents in excess of $250 million.

Over the past 10 years, our construction activities have accounted for 6% of Nova Scotia investment and approximately 25,000 person years of Nova Scotia employment resulting in total personal income estimated to be $500 million (1987$).

On the operational side, Nova Scotia Power's activity has accounted for approximately 48,000 person years of Nova Scotia employment resulting in personal income of $960 million (1987$).

Overall, Nova Scotia Power has accounted for approximately 3% of total provincial output over the last 10 years. Over the next 10 years, we see Nova Scotia Power's contribution to the provincial economy as follows:

- **Construction activity is expected to account for 4% of Nova Scotia investment, 20,000 person years of employment and personal income of $420 million (1987$).**
- **Operational activities are expected to produce 65,000 person years of Nova Scotia employment, resulting in personal income estimated at $1.3 billion.**
- **We expect to contribute in excess of 3% of the total provincial output.**

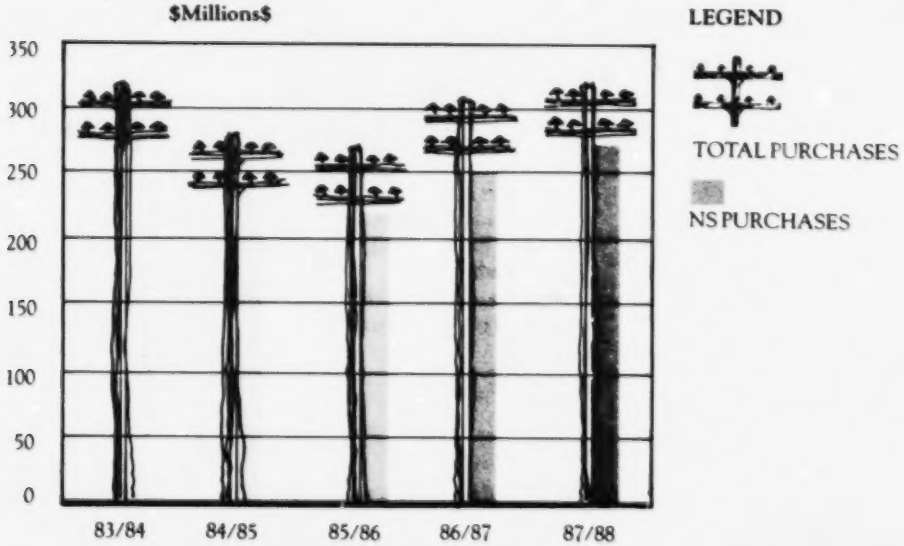
CUSTOMER SERVICE IS A PRIORITY

The simple fact is that we build plants and transmit and distribute electrical energy for one purpose — to meet our customers' needs.

In the immediate and long-term future, Nova Scotia Power will:

- **Ensure that all customers receive service in a prompt, courteous and effective manner.**
- **Seek methods to improve reliability of service.**
- **Enhance customer satisfaction by increasing the value of our service through promotion of the wise and efficient use of energy.**

NOVA SCOTIA POWER PURCHASE ACTIVITY



TOWARDS THE YEAR 2000

PROTECTING OUR ENVIRONMENT

Nova Scotia Power's position on the environment is to continue to be environmentally conscious in all aspects of our operations, not only in the areas of acid rain and hazardous waste management, but also in all our dealings with customers, be it the setting of poles, cutting of trees, protecting of our rivers and all natural habitat.

Nova Scotia Power is spending approximately $10 million annually for environmental enhancement, and this will be increased over the next decade in accordance with requirements to meet environmental standards.

Emission Controls

When burned, sulphur in coal and oil produces sulphur dioxide, also known as SO_2. The SO_2 is a gas which passes up the stack together with other products of combustion. Sulphur dioxide is a primary suspect as one of the causes of acid rain.

The primary sources of acid rain in Nova Scotia originate outside the Province. Nova Scotia Power, therefore, is committed to contribute to the domestic and international effort to reduce acid rain. The Corporation will introduce the necessary programs to achieve the standards set by the Province of Nova Scotia which will include fulfilling the commitment to the Federal-Provincial Acid Rain Agreement.

Nova Scotia Power is committed to the use of Nova Scotia coal. Therefore, we have identified several options that will enable our coal dependency program to continue and, at the same time, alleviate any adverse effect on the environment.

These options include:

- **utilization of low sulphur coal**
- **clean combustion technologies (Fluidized Bed Combustion)**
- **flue gas cleaning technologies (scrubbers)**
- **advanced coal cleaning technologies**
- **coal gasification.**

In accordance with the Federal-Provincial Acid Rain Agreement:

- **Trenton No. 6, now under construction, will burn low sulphur coal.**
- **All future Nova Scotia Power coal-burning generating units will be environmentally compatible.**

Other Issues

Nova Scotia Power has taken an aggressive approach in the area of hazardous waste management, with particular emphasis on polychlorinated biphenyls (PCBs).

In the area of aquatic environment, we will ensure that fish protection measures are properly implemented and evaluated; also wildlife protection will be part of our commitment.

In these areas:

- **Nova Scotia Power will clean up all PCB-contaminated inventories over the next four to six years, and all concentrated PCB equipment will be removed from the system by the end of 1988.**

- **Nova Scotia Power will work in co-operation with various government agencies to encourage safe fish passage facilities and will ensure the maintenance of guaranteed minimum flow of water in specified rivers below dams or other facilities.**

TOWARDS THE YEAR 2000

COMPETING IN THE MARKETPLACE

In pursuit of our mandate to serve the broad social and economic interests of Nova Scotia, the Corporation has been aggressively pursuing the development of an external market for power and energy, based upon Nova Scotia's indigenous coal reserves and the opportunity to further develop our coal industry and, at the same time, provide a new source of revenue for the Corporation and its customers.

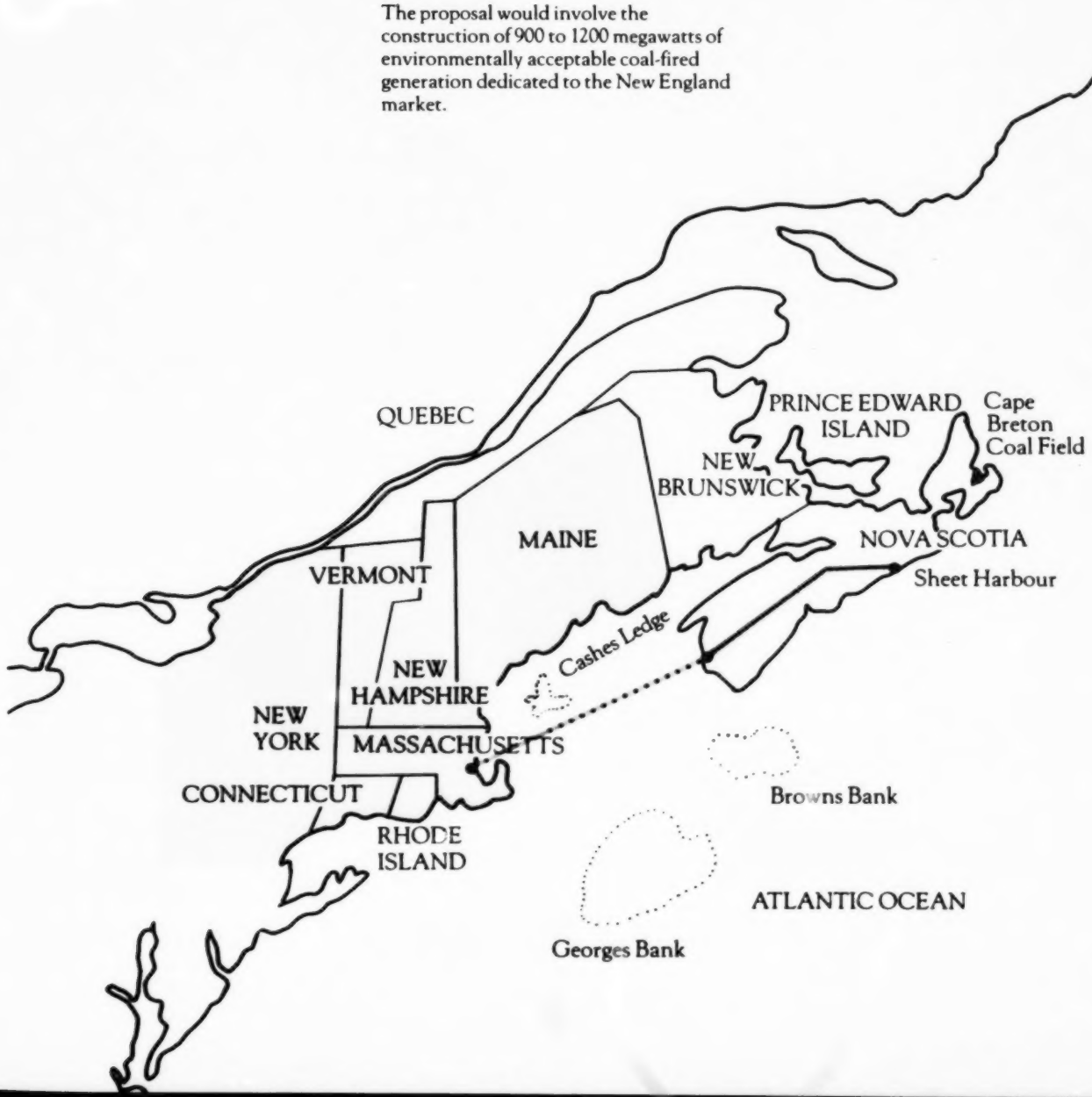
Specifically, the Corporation has developed a plan to export power to New England via a high voltage undersea cable.

The proposal would involve the construction of 900 to 1200 megawatts of environmentally acceptable coal-fired generation dedicated to the New England market.

The final feasibility study, which will require support from New England utilities, could begin as early as July of this year.

The realization of this project — which could come on line in the mid-1990s — would not create a financial burden for Nova Scotia consumers in that it will be independently funded. Rather, it will provide financial benefits in addition to creating new employment and injecting additional dollars into the Nova Scotia economy.

- **Nova Scotia Power will aggressively pursue this export project because of its inherent benefits.**



TOWARDS THE YEAR 2000

HUMAN RESOURCES

The plans that will unfold over the next decade will require the high level of competence that is characteristic of the employees of Nova Scotia Power and diligent management at all levels of the organization.

- **Nova Scotia Power is committed to providing a working environment conducive to the 1990s offering job satisfaction, a safe and healthy workplace, training and state-of-the-art technology, good employee relations, recognition and rewards.**

CONCLUSION

Nova Scotia Power is dedicated to serving the consumers, businesses, industries and economy of this Province.

We have been pleased with the confidence shown in us by our customers and will strive to maintain that level of confidence as we approach a new century.